

Application No. 10/598,156

May 27, 2010

Reply to the Office Action dated April 12, 2010

Page 7 of 15

AMENDMENTS TO THE DRAWINGS:

The attached sheet of Drawings includes new Figs. 4 and 5.

Attachment: one new Sheet.

REMARKS/ARGUMENTS

Claims 1-16 are pending in this application. The Examiner has withdrawn claims 8-12 from consideration. In this Amendment, Applicant AMENDS the specification and claims 1, 3-7, and 13 and ADDS Figs. 4 and 5 and claims 14-16.

Applicant's counsel greatly appreciates the courtesies extended by the Examiner in the personal interview of May 12, 2010. Applicant's counsel, Applicant's representative, and one of the inventors discussed the prior art of record and possible amendments to overcome the outstanding prior art rejections.

Applicant affirms election of claims 1-7 and 13. Applicant respectfully requests that the Examiner rejoin, consider, and allow claims 8-12 when generic claim 1 is allowed. Further, Applicant reserves the right to file a Divisional Application to pursue non-elected claims.

On pages 2 and 3 of the outstanding Office Action, the Examiner objected to Applicant's drawings for allegedly failing to show every feature of the claims.

Applicant has added Figs. 4 and 5 to show the currently-amended features of "a first electrode defined by a frontmost electrode of the display, the frontmost electrode defining both a display electrode arranged to activate the display and a sensing electrode of the capacitance sensor to detect the presence of the user; and a second electrode defined by one of a case of the display and a power terminal of a circuit arranged to drive or control the display" which were described in the originally filed Specification. See for example, the paragraph bridging pages 3 and 4; the first full paragraph on page 7; and claims 3 and 4 of Applicant's originally filed application.

Applicant's undersigned attorney hereby declares that no new matter has been added by Figs. 4 and 5 and that the subject matter shown in Figs. 4 and 5 was described in Applicant's originally filed application.

In an apparent objection to the originally filed drawings, the Examiner stated that the feature of "means to effect activation" recited in claims 7 and 13 was not shown in the drawings. Applicant has deleted this feature from claims 7 and 13.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of this objection to the drawings.

On page 3 of the outstanding Office Action, the Examiner rejected claim 7 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite.

Applicant has amended claim 7 to correct the informalities noted by the Examiner.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 7 under 35 U.S.C. § 112, second paragraph.

On page 4 of the outstanding Office Action, the Examiner rejected claim 1 under 35 U.S.C. § 102(e) as being anticipated by Pallakoff (US 2005/0012723). On page 5 of the outstanding Office Action, the Examiner rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Pallakoff in view of Siwinski et al. (US 2002/0171610). On page 5 of the outstanding Office Action, the Examiner rejected claims 3 and 4 under 35 U.S.C. § 103(a) as being unpatentable over Pallakoff in view of Siwinski et al. and further in view of Inoue et al. (US 5,929,834). On pages 6 and 7 of the outstanding Office Action, the Examiner rejected claims 5, 6, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Pallakoff in view of Siwinski et al. and Inoue et al. and further in view of Gerpheide et al. (US 5,565,658). On page 8 of the outstanding Office Action, the Examiner rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Pallakoff in view of Siwinski et al. and Inoue et al. and further in view of Gremm (US 2003/0001223).

Applicant respectfully traverses the rejections of claims 1-7 and 13.

Applicant's claim 1 has been amended to recites:

A display comprising:
a capacitance sensor arranged to detect a presence of a user and
including:

a first electrode defined by a frontmost electrode of the display, the frontmost electrode defining both a display electrode arranged to activate the display and a sensing electrode of the capacitance sensor to detect the presence of the user; and

a second electrode defined by one of a case of the display and a power terminal of a circuit arranged to drive or control the display.
(emphasis added)

Applicant's claim 13 recites features that are similar to the above-emphasized features recited in Applicant's claim 1.

In Section No. 8 on pages 4 and 5 of the outstanding Office Action, the Examiner alleged that Pallakoff teaches each of the features recited in Applicant's claim 1.

Applicant has amended claim 1 to recite the feature of "a capacitance sensor ... including ... a first electrode defined by a frontmost electrode of the display, the frontmost electrode defining both a display electrode arranged to activate the display and a sensing electrode of the capacitance sensor to detect the presence of the user." Support for this feature is found, for example, in Applicant's original claims 4 and 5 (which have been amended in this Amendment), in **Figs. 1, 4, and 5** of Applicant's drawings, and in the paragraph bridging pages 3 and 4 and the first full paragraph on page 7 of Applicant's specification.

None of Pallakoff, Siwinski et al., Inoue et al., Gerpheide et al., and Gremm teach or suggest this feature.

First, although Pallakoff discusses capacitance sensors, for example, in paragraphs [0086], [0099], and [0261] as noted by the Examiner, Pallakoff fails to provide any details of the capacitance sensors and certainly fails to teach or suggest using a frontmost electrode of a display that is used as both a display electrode and a sensing electrode.

Thus, Pallakoff fails to teach or suggest the feature of "a capacitance sensor ... including ... a first electrode defined by a frontmost electrode of the display, the frontmost electrode defining both a display electrode arranged to activate the display and a sensing electrode of the capacitance sensor to detect the presence of the user" as recited in Applicant's claim 1 and as similarly recited in Applicant's claim 13.

Second, the Examiner has relied upon Siwinski et al. to allegedly teach an electroluminescent display. Although Siwinski et al. discusses capacitive touch screen panels, for example, in paragraph [0031] with regard to **Fig. 9** as noted by the Examiner, Siwinski et al. fails to mention or discuss capacitance sensors and certainly fails to teach or suggest using a frontmost electrode of a display that is used as both a display electrode and a sensing electrode.

Thus, Siwinski et al. fails to teach or suggest the feature of “a capacitance sensor ... including ... a first electrode defined by a frontmost electrode of the display, the frontmost electrode defining both a display electrode arranged to activate the display and a sensing electrode of the capacitance sensor to detect the presence of the user” as recited in Applicant’s claim 1 and as similarly recited in Applicant’s claim 13.

Third, the Examiner has relied upon Inoue et al. to allegedly teach a capacitance sensor. However, as seen for example in **Fig. 4** of Inoue et al., the upper detecting electrode **1b** (frontmost electrode) of Inoue et al. is only a sensor electrode and is not used as display electrode.

Thus, Inoue et al. fails to teach or suggest the feature of “a capacitance sensor ... including ... a first electrode defined by a frontmost electrode of the display, the frontmost electrode defining both a display electrode arranged to activate the display and a sensing electrode of the capacitance sensor to detect the presence of the user” as recited in Applicant’s claim 1 and as similarly recited in Applicant’s claim 13.

Fourth, the Examiner has relied upon Gerpheide et al. to allegedly teach a capacitance sensor. However, Gerpheide et al. fails to teach or suggest that any of the electrodes used in the capacitance sensor is used as a display electrode and certainly fails to teach or suggest that any of the electrodes of the capacitance sensor is the frontmost electrode of a display.

Thus, Gerpheide et al. fails to teach or suggest the feature of “a capacitance sensor ... including ... a first electrode defined by a frontmost electrode of the display, the frontmost electrode defining both a display electrode arranged to activate the display and a sensing electrode of the capacitance sensor to detect the presence of the user” as recited in Applicant’s claim 1 and as similarly recited in Applicant’s claim 13.

Fifth, the Examiner has relied upon Gremm to allegedly teach the use of a diode. While Gremm does disclose capacitance sensors, Gremm fails to teach or suggest that a frontmost electrode of the display is used as both a display electrode and a sensor electrode.

Thus, Gerpheide fails to teach or suggest the feature of “a capacitance sensor ... including ... a first electrode defined by a frontmost electrode of the display, the frontmost

electrode defining both a display electrode arranged to activate the display and a sensing electrode of the capacitance sensor to detect the presence of the user” as recited in Applicant’s claim 1 and as similarly recited in Applicant’s claim 13.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(e) as being anticipated by Pallakoff and the rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Pallakoff in view of Siwinski et al. and Inoue et al. and further in view of Gerpheide et al. Further, Applicant respectfully submits that any prior rejection of claims 1 and 13 relying upon one or more of Pallakoff, Siwinski et al., Inoue et al., Gerpheide et al., and Gremm would be improper.

Applicant’s new claim 14 recites:

A display comprising:
a capacitance sensor arranged to detect a presence of a user and including a first electrode defined by a front electrode of the display; and
a protection member arranged to protect the capacitance sensor from an excessive voltage on the front electrode and including:
a first end connected to the front electrode of the display; and
a second end connected to at least one circuit element of the capacitance sensor. (emphasis added)

None of Pallakoff, Siwinski et al., Inoue et al., and Gerpheide et al. teaches or suggests the use of a diode connected to a capacitance sensor.

Although Gremm teaches the use of diodes, Gremm fails to teach or suggest the use of diodes as protecting a capacitance sensor. The diodes of Gremm are used to connect/disconnect different portions of the circuits of Gremm and are not used to provide protection. The abstract of Gremm states, “By means of connecting means, e.g. in the form of transistors or diodes, with a corresponding control in each case precisely one sensor branch is connected to the remaining circuit and the corresponding sensor element is controlled and evaluated.” As seen by comparing, for example, **Figs. 1 and 3** of Gremm where the transistors **T12a-T12c** of **Fig. 1**, which do not provide any protection, are replaced by the diodes **D212a-D212c** of **Fig. 3**, the diodes **D212a-D212c** of Gremm are used to connect/disconnect different portions of the circuits of Gremm and are not used to provide protection. With regard to **Fig. 1**

of Gremm, Paragraph [0024] of Gremm states, "The sensor branches 19 also have connecting switching means in the form of transistors T12a-c, whose function is to connect the touch switches C13 with the control part 12 and evaluating part 15." As with the transistors **T12a-T12c** of Fig. 1 of Gremm, the diodes **D212a-D212c** of Gremm also only provide connecting switching means.

Gremm fails to teach or suggest that the sensor element capacitors **C213a-C213c** are exposed or could be exposed to any voltages that could damage the sensor element capacitors **C213a-C213c**. Thus, there is no need to protect, with diodes or other circuit elements, the sensor element capacitors **C213a-C213c** of Gremm. Because Gremm fails to teach or suggest that the diodes **D212a-D212c** should be used to protect a capacitance sensor, it would be improper to modify Pallakoff, Siwinski et al., Inoue et al., and Gerpheide et al., or any other prior art reference, in view of Gremm to use a diode to protect a capacitance sensor.

Thus, Pallakoff, Siwinski et al., Inoue et al., Gerpheide et al., and Gremm fail to teach or suggest the feature of "a protection member arranged to protect the capacitance sensor from an excessive voltage on the front electrode" as recited in Applicant's claim 14.

Accordingly, Applicant respectfully submits that any prior rejection of claim 14 relying upon one or more of Pallakoff, Siwinski et al., Inoue et al., Gerpheide et al., and Gremm would be improper.

Accordingly, Applicant respectfully submits that the prior art of record, applied alone or in combination, fails to teach or suggest the unique combination and arrangement of elements recited in claims 1, 13, and 14 of the present application. Claims 2-7, 15, and 16 depend upon claims 1 and 14 and are therefore allowable for at least the reasons that claims 1 and 14 are allowable. As requested above, Applicant respectfully requests that the Examiner rejoin, consider, and allow claims 8-12 when generic claim 1 is allowed

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

Application No. 10/598,156
May 27, 2010
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Page 14 of 15

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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